

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125206

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMULAS IN USUAL AND BINOMIAL FORMS HAVE BEEN DECUCED WHICH EXPRESS THE EFFECTIVE VISCOSITY OF STRUCTURIZED LIQUIDS IN TERMS OF THE BREAKDOWN EXTENT AND THIXOTROPIC REFORMING OF THE STRUCTURE. THE KNOWN BINOMIAL FORMULAS ARE COMPARED WITH THE ONE SUGGESTED.      FACILITY--INSTITUT FIZICHESKOY KHMII AN SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC 632.95

OVCHINNIKOV, P. N., BAT', I. I., MIRONOVA, G. A., and GINZBURG, B. R.

"Study of the Kinetics of the Liquid Phase Reduction of 3-Chloro- and 3,4-Dichloronitrobenzenes Over Platinized Carbon"

Alma-Ata, Katalitich. reaktsii v zhidkoy faze (Catalytic Reactions in the Liquid Phase) Nauka, 1972, pp 399-403 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7N687 by T. A. Belyayeva)

Translation: The preparative technology for chloro- and dichloroanilides used as poly products during the synthesis of herbicides is based on the catalytic reduction of the corresponding nitro compounds with H<sub>2</sub> under a pressure of 200-300 atm, in the presence of 0.5 to 1% platinized carbon. It was shown that the rate of reduction of 3-ClC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub> and 3,4-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NO<sub>2</sub> in a 75% ethanol on 0.5, 1, and 2% platinized carbon was proportional to the concentration of the active complex on the catalyst surface. The reaction rate is limited by the activation of H<sub>2</sub>.

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USSR

IVAKHnenko, A. G.; OVCHinnIKOV, V. A.; PETRAKE, G.: GULYAN, N. V. (Kiev)

"Automatic Control of Complex Plants with Prediction Optimization by the Self-Organization Principle"

Kiev, Avtomatika; July-August 1973, pp 39-52

**Abstract:** In control with prediction optimization each solution is evaluated from the standpoint of its effect on predicting the future.

In this article the problem of the synthesis of optimal control was solved in discrete time. A plant (hydroelectric power station) for which optimal control may be found by means of both dynamic programming and the self-organization principle (selection) was taken as the first example. This made it possible to determine the dependence of the error of the exact solution on the choice of degree of freedom. For  $F \geq 90$  both methods proved to give close results. In contrast to dynamic programming, the self-organization method is applicable to more complex plants with a greater amount of delaying independent variables and to optimization in a sliding interval of the prediction. A complex stochastic plant for which dynamic programming cannot be applied was taken as the second example.

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USSR

IVAKHnenko, A. G., et al., Avtomatika; July-August, 1973, pp 39-52

The article includes 22 equations, seven figures, and five tables. There  
are nine bibliographic references.

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USSR

UDC: 621.317.7

OVCHINNIKOV, V. A.

"A Duty Ratio Meter for a Square Pulse Train"

V sb. Obmen op-tom v radiopromyshlennosti (Experience Pooling in the Radio Industry--collection of works), Vyp. 6, Moscow, 1970, pp 75-76 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11A292)

Translation: The author proposes a duty ratio meter for square pulse signals based on comparing the average and pulse (maximum) value of a signal for a period. Operation of the device reduces to measuring the average value of the current passing through a fixed load impedance assuming a strictly fixed pulse voltage is applied to the input of the measurement circuit. E. L.

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USSR

UDC: 577.4

OKONOV, K. S., OVCHINNIKOV, V. D., GOTUA, D. A.

"Modeling a System of Variable Structure in Terms of a Buslenko  
Aggregate for Optimum Control of an Object Under Conditions of  
Interference"

Probl. sistemotekhniki--sbornik (Problems of Systems Analysis--  
collection of works), vyp. 1, n.p., "Sudostroyeniye", 1972, pp  
134-143 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V394)  
[No abstract]

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USSR

UDC 51

OVCHINNIKOV, V. G.

"An Algorithm for Analyzing PERT Charts"

V sb. Mat. vopr. upr. proiz-vom (Mathematical Problems of Production Control--  
collection of works), vyp. 3, Moscow, 1971, pp 33-34 (from RZh-Kibernetika,  
No 12, Dec 72, Abstract No 12V386)

No abstract

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USSR

UDC 51

OVCHINNIKOV, V. G.

"An algorithm for Optimizing the Total Development Cost"

V sb. Mat. vopr. upr. proiz-vom (Mathematical Problems of Production Control-- collection of works), vyp. 2, Moscow, 1971, pp 35-39 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V387)

No abstract

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Optical

USSR

UDC 621.378.325

ZHARKOV, A. P., KAMACH, YU. E., KOZLOVSKIY, YE. N., LYUBAVSKIY,  
YU. V., OVCHINNIKOV, V. M.

"The OGM-20 Monopulse Laser"

Leningrad, Optiko-mekhanicheskaya Promyshlennost', No 9, Sep 70,  
pp 30-34

Abstract: The authors describe the circuits and give the principal characteristics of a ruby monopulse laser in which the Q of the resonator is modulated by use of the linear electrooptic effect in potassium dihydrophosphate crystals. The OGM-20 is the first industrial model of a monopulse laser designed for jobs requiring brief high-power light pulses. The unit can be used to study the interaction between radiation and matter both in microvolumes with the use of special focusing lenses, and on the macroscopic scale in optically transparent media with the use of a telescopic system. An IFP-800 xenon tube is used for pumping. The instrument emits on a wavelength of  $649.3 \mu$  with a prf of 1 Hz, pulse emission power is 2.107 watts, the duration of a

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USSR

ZHARKOV, A. P., et al, Optiko-mekhanicheskaya Promyshlennost',  
No 9, Sep 70, pp 30-34

pulse at one-half maximum intensity is  $2 \cdot 10^{-8}$  second, the angle of beam divergence at one-half maximum intensity without the telescope is 10', the laser head itself measures 140 x 840 x 440 mm, and the power supply and control unit measures 523 x 530 x 985 mm. The instrument is water-cooled and is designed for operation in a temperature range of 5-35°C at a relative humidity of less than 90 percent.

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1/2 039

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--EMISSION SPECTRUM AND LONGITUDINAL MODE SELECTION IN A LASER WITH  
ELECTROOPTICAL Q SWITCHING -U-  
AUTHOR-(04)-GENKIN, R.O., ISYANOVA, YE.D., MARUGIN, A.M., OVCHINNIKOV,  
V.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL PRIKLADNOI SPEKTROSKOPII, VOL. 12, FEB. 1970, P. 227-230  
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--RUBY LASER, EMISSION SPECTRUM, SINGLE MODE LASER, LASER Q  
SWITCHING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0915

CIRC ACCESSION NO--AP0107444

STEP NO--UR/0368/70/012/000/0227/0230

UNCLASSIFIED

2/2 039

CIRC ACCESSION NO--AP0107444

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF AN OPTICAL ARRANGEMENT FOR NARROWING TO ONE LONGITUDINAL MODE THE EMISSION SPECTRUM OF AN ELECTROOPTICALLY Q SWITCHED RUBY LASER, USING A SPECIAL POLARIZATION ELEMENT WHICH SPLITS THE LASER RESONATOR INTO TWO CHANNELS. ONE EMISSION LINE WAS OBTAINED WITH A SPECTRAL WIDTH OF NOT MORE THAN 150 MHZ; EMISSION SPECTRA ARE ILLUSTRATED FOR BOTH CHANNELS SEPARATELY AND TOGETHER.

UNCLASSIFIED

USSR

UDC 621.373:623.543

BEREZKIN, A. N., DUNAYEV, YU. A., KAMACH, YU. E., KOZLOVSKIY, YE. N., and  
OVCHINNIKOV, V. M., Physical Engineering Institute imeni A. F. Ioffe

"Use of Monopulse Optical Laser for Photographing Models During Ballistic Investigations"

Moscow, Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii, Vol 15,  
No 1, Jan-Feb 70, pp 21-25

Translation: The article investigates the possibilities of application of optical lasers for the illumination of moving objects in shadow photography. A diagram of the experimental apparatus is presented and a description is made of the optical laser, telescopic system which forms the illumination beam for the moving object, and a system of synchronization of illumination pulse with the moment of arrival of the investigated object at a given point in the field of photograph taking. The presented photographs clearly show the boundaries of flying solids, shock waves, and discontinuities in solid's track. The article shows the possibility of application of a monopulse ruby laser as a source of illumination in the photography of moving objects during aeroballistic investigations.

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Lasers and Masers

USSR

UDC: 621.373.029.67

ARKAD'YEV, D. I., KAMACH, Yu. E., KOZLOVSKIY, Ye. N., OVCHINNIKOV,  
V. M., and SHAMEUROV, V. A.

"Monopulse Ruby and Neodymium-Glass Laser"

Moscow, Radiotekhnika i Elektronika, Vol. 15, No. 3, 1970, pp 523-  
528

**Abstract:** This article describes a laser designed by the authors to correct defects in an earlier laser developed by some of the men named above and described in the Russian Journal of Applied Spectroscopy ("Laser with Neodymium Glass Electro-Optical Q Modulator," 1967, Vol. 7, No. 2, p. 269). This earlier laser used a half-wave electro-optical gate with a LDP crystal between crossed polarized prisms of Iceland spar. The presence of a second polarizer in the laser introduced additional absorption and dispersion losses in the Iceland spar, and the half-wave voltage for controlling the gate for neodymium glass was as much as 18-20 kv. The new laser uses ruby and neodymium glass

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USSR

ARKAD'YEV, D. I., et al, Radiotekhnika i Elektronika, Vol 15,  
No 3, 1970, pp 523-528

Abstract:

as well as a quarter-wave electro-optical gate. A diagram of the new type of laser is shown. It consists of a special prism for full internal reflection, the electro-optical crystal polarized by a Glan prism, the ruby with sapphire ends, and stopping plates. Curves for the device giving the output energy as a function of the delay in application of the voltage to the gate for the ruby and the neodymium glass are shown; there are also curves for the output energy as a function of the voltage applied to the gate and of the pumping energy. The authors express their gratitude to A. M. Prokhorov for his valuable comments on the article.

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USSR

UDC: 621.375.8

KAMACH, Yu. E., KOZLOVSKIY, Ye. N., OVCHINNIKOV, V. M., SOLOMATNIKOVA, G. M.

"An Electro-Optical Reflection Gate for Q-Switching a Laser Cavity"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tsvarynyye Znaki,  
No 17, Jun 72, Author's Certificate No 270920, Division H, filed 16 Feb 68,  
published 24 May 72, p 250

Translation: This Author's Certificate introduces an electro-optical reflection gate for Q-switching a laser cavity. The gate is made from an optically uniaxial crystal in the form of a parallelepiped with annular electrodes, the edges being parallel to the optical Z axis, and with a base inclined to the optical axis of the crystal at an angle equal to or greater than the angle of total internal reflection. A reflective coating is applied to part of the lateral face opposite the inclined base. As a distinguishing feature of the patent, the gate is designed for use in lasers with unpolarized emission. The other base of the crystal is inclined to its optical axis at an angle equal to or greater than the angle of total internal reflection, and is located in a plane which is mutually perpendicular with respect to the first base.

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UDC: 621.375.8

USSR

KAMACH, Yu. E., KOZLOVSKIY, Ye. N., OVCHINNIKOV, V. M.

"A Laser"

Moscow, Otkrytiya, Izobreteniya, Promyshlennye Obraztsy, Tovarnyye Znaki, No 17, Jun 72, Author's Certificate No 240136, Division H, filed 16 Oct 67, published 24 May 72, p 250

Translation: This Author's Certificate introduces a laser which contains an active element, an optical cavity, and a polarization element which gives two orthogonally polarized beams at the output. As a distinguishing feature of the patent, provision is made for controlling the polarization of the output emission at different stages of development of the monopulse, and for increasing the power of the output emission. Located in the optical cavity of the laser between the polarization and reflection elements is a polarization element which converts two incident orthogonally polarized waveforms to nonpolarized emission, and connected between the polarization elements in the direction of beam travel are two electro-optical controlling elements.

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USSR

UDC: 621.375.8

KAMACH, Yu. E., KOZLOVSKIY, Ye. N., OVCHINNIKOV, V. N., SOLOMATNIKOVA, G. M.  
"An Electro-Optical Reflection Gate for Q-Switching a Laser Cavity With  
Polarized Emission"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,  
No 17, Jun 72, Author's Certificate No 273023, Division H, filed 7 Feb 68,  
published 24 May 72, p 250

Translation: This Author's Certificate introduces: 1. An electro-optical reflection gate for Q-switching a laser cavity with polarized emission. The gate is made from an optically uniaxial crystal in the form of a parallelepiped with annular parallel electrodes on the ends of the crystal. The edges of the crystal are perpendicular to one of the bases and parallel to the Z axis. As a distinguishing feature of the patent, in order to reduce losses of light, simplify design, improve reliability and increase stability, the other base of the crystal is made in the form of at least one reflecting face which is inclined to the optical axis of the crystal at an angle equal to or greater than the angle of total internal reflection. 2. A modification of this gate in which a reflective coating is applied to part of the lateral face opposite the inclined base and bounded by the electrode.

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USSR

UDC 547.26'118

PUDOVIK, A. N., CHERKASOV, R. A., and OVCHINNIKOV, V. V., Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Some Reactions of Cyclic Dithioacids of Phosphorus"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 12, Dec 72, pp 2638-2642

**Abstract:** Reactions of cyclic 2,3-butyleneglycoldithiophosphoric, 1,3-butyleneglycoldithiophosphoric, neopentyldithiophosphoric, and pinacolivedithiophosphoric acids with triethyl phosphite, benzylidene malonic ester, methylenemalonic ester, diethyl maleate, and diethyl fumarate were investigated. The reactions follow the Arbuzov rearrangement leading to the formation of full esters of cyclic dithiophosphates. By kinetic and thermographic methods it was shown that the cyclic dithiophosphates exhibit higher activity in reactions with acrylonitrile than their acyclic analogs. On the basis of kinetic studies the  $\sigma_{\phi}$  constants for cyclic fragments of dithioacids were determined.

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USSR

UDC 547.20'18

ISHMAYEVA, E. A., CHERKASOV, R. A., OVCHINNIKOV, V. V., and PUDOVIK, A. N.,  
Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Dipole Moments of Organophosphorus Compounds. X. 1,3,2-Dioxa- and  
Dithiaphospholanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 12, Dec 72, pp 2642-2644

**Abstract:** Dipole moments of the P-S bond were calculated from experimental  
dipole moments of 1,3,2-dithiaphospholanes. The values determined ranged  
from 0.26-0.25 D. The change in the bond angle S:P-Alk by  $\pm 3^\circ$  with regard  
to the accepted value of  $115^\circ$  results in a change of the dipole moment of  
the P-S bond by  $\pm 0.03$  D. The change of the dipole moment of the P-S bond  
caused by the effect of the elements surrounding the phosphorus atom  
indicates that interactions do take place in the system under investigation.

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USSR

UDC 547.26'118

TOROPOVA, V. F., CHERKASOV, R. A., SAVEL'YEVA, N. I., GRIGOR'YEVA, L. A.,  
SHERGINA, I. V., OVCHINNIKOV, V. V., and PUDOVIK, A. N., Kazan' State  
University imeni V. I. Ul'yanov-Lenin

"Study of Stability of Complexes of Silver, Nickel and Cobalt Ions With  
Phosphorus Dithioacid Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1673-1676

**Abstract:** A study was made of the composition and stability of complex compounds of silver ions with a series of phosphorus dithioacid derivatives, as well as complexes of nickel and cobalt ions with diethyldithiophosphoric acid by the potentiometric method in a 90-percent ethanol-aqueous solution at an ionic strength of 0.3 and a temperature of 25°. Stability constants ( $\log \beta_2$ ) are determined and correlated with constants for substituents at the phosphorus atom in the molecule of the ligand, particularly for the 2,3-butylene glycol substituent.

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USSR

UDC 541.67:547.879

VERESHCHAGIN, A. N., ARSHINOVA, R. P., VUL'FSOV, S. G., CHERKASOV, R. A., and  
OVCHINNIKOV, V. V., Institute of Organic and Physical Chemistry imeni A. Ye.  
Arbuzov, USSR Academy of Sciences, at Kazan', and Kazan' State University imeni  
V. I. Ul'yanov-Lenin

"Steric Structure of Phosphorus-Containing Heterocycles. II. Dipole Moments  
and Kerr Constants of Certain 2-Thiono-1,3,2-Dioxaphosphorinanes"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 11, Nov 71, pp 1464-1468

Abstract: Continuing their earlier research on the steric structure of this group of heterocycles, the authors studied four of the 2-thiono-1,3,2-dioxaphosphorinanes with use of the dipole-moment and Kerr-effect methods, along with nuclear magnetic resonance ( $\text{P}^{31}$ ) data. The steric interactions in these four compounds, the Kerr constants of possible structures of compound IV, and the dipole moments of the four, were all determined experimentally. The 2,4-dimethyl- and 2-chloro-2-thiono-1,3,2-dioxaphosphorinanes have chair configuration with the equatorial thionophosphoryl group; the 2-methyl derivative exists in the form of an equilibrium mixture of the axial and equatorial conformers, with predominance of the former.

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Microelectronics

USSR

UDC: 681.325.65

DSHKHUNYAN, V. L., OVCHINNIKOV, V. V., CHICHERIN, Yu. E.  
"A Multiple-Threshold Logic Element"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrattsy, Tovarnyye Znaki,  
No 32, Nov 71, Author's Certificate No 319077, Division H, filed 30 Jul 70,  
published 28 Oct 71, p 177.

Translation: This Author's Certificate introduces a multiple-threshold logic element which contains a linear adder based on resistors, controlled by input diodes, and connected through biasing diodes with interconnected cathodes to a series circuit comprised of summing resistors and a multi-threshold discriminator. As a distinguishing feature of the patent, the design provides for increased speed and utilization of components which can be readily made in integrated-circuit form. The multithreshold discriminator is made in the form of several parallel-connected single-threshold discriminators based on a transistor with grounded emitter. The base of the transistor is connected to the collector of another transistor whose emitter is connected to the corresponding summing resistor, while the collector is connected to the base of the corresponding transistor in the preceding discriminator.

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USSR

UDC 681.325.65

POLTORATSKIY, E. A., VARLAMOV, I. V., AVTONOMOV, V. A., and OVCHINNIKOV, V. V.  
"A Logic Threshold Device"

USSR Author's Certificate No 278751, Filed 5 Jun 69, Published 3 Dec 70  
(from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya  
Tekhnika, No 8, 1971, Abstract No 8B134 P)

Translation: A logic threshold device is proposed which contains a diode-resistor adder and a discriminator made from a tunnel diode and a transistor. Their purpose is to increase the operational reliability of the device and to expand its logic capabilities. The discriminator contains supplementary photodiodes, and the adder contains electroluminescent diodes and a tunnel diode. The anode and cathode of the tunnel diode are joined to the anodes of the electroluminescent diodes and optically connected with the photodiodes of the discriminator, whose anodes, in turn, are connected via tunnel diodes to the bases of the transistors.

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USSR

UDC 139.143.43:661.718.1

ISHMAYEVA, E. A., CHERKASOV, R. A., OVCHINNIKOV, V. V., and PUDOVIK, A. N.,  
Kazan' State University imeni V. I. Ul'yanov-Lenin.

"Dipole Moments of Cyclic Thio- and Dithiophosphonates"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 71,  
pp 1317-1318

Abstract: The authors determined the dipole moments of cyclic thio- and  
dithiophosphonates. It is suggested that there is conformational ring mobility.

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USSR

UDC 51:621.391

OVCHINNIKOV, V. V.

"Upper Boundary of Error Probability for Channel Described by Restoration Process"

4-y Simpozium Po Probl. Izbytochn. v Informatsion. Sistemakh. Dokl. Ch. 2. [4-th Symposium on Problems of Redundancy in Information Systems. Reports, Part 2 -- Collection of Works], Leningrad, 1970, pp 470-474 (Translated from Referativnyy Zhurnal Kibernetika, No 3, 1971, Abstract No 3 Y366 by V. Negarmin).

Translation: A binary symmetrical channel is studied, the stream of errors in which is a restoration process with a finite restoration time. For this type of error stream, the lengths of series  $\lambda$  and  $\lambda$  of symbols 0 and 1 respectively are independent random quantities with distributions  $P(\lambda)$  and  $P(\lambda)$  respectively. The upper bound for the probability of decoding error is concluded.

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UDC: 681.325.65:621.382

USSR

CHICHERIN, Yu. Ye., OVCHINNIKOV, V. V., DSHKHUNYAN, V. L., VDOVICHENKO,  
A. P.

"A Threshold Logic Element"

USSR Author's Certificate No 318163, filed 30 Jul 70, published 27 Jan 72  
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 7,  
Jul 72, Abstract No 7A58 P)

Translation: The Author's certificate presents a logic element of the threshold type which contains a linear adder based on resistors and controlled by input diodes and which is connected, through biasing diodes with interconnected cathodes, to a discriminator. To improve the degree of integration and increase resistance to climatic effects as well as to simplify the device, the discriminator is based on a single two-emitter transistor with a collector resistor having one emitter connected to the linear adder and a bias resistor, while the second emitter is connected to a grounding line. The base of this transistor is connected to the grounding line through a biasing resistor.  
One illustration.

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USSR

UDC: 621.396.96:621.371

CHIZHOV, V. I., NUZHDIN, V. M., YEGOROV, V. V., OVCHINNIKOV, Ya. Yu.

"Energy Characteristics of a Signal Reflected from an Extended Rough Surface"

Tr. Mosk. aviat. in-ta (Works of the Moscow Aviation Institute), 1970,  
vyp. 208, pp 48-62 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1G28)

Translation: The authors consider the energy characteristics of a reflected signal as a function of the statistical properties of the reflecting surface, the velocity vector of the aircraft, radiation patterns of the transmitting and receiving antennas, and parameters of the probing signal. The spectrum of Doppler fluctuations at the receiver output is calculated. The indeterminacy function is found for the reflected signal. It is shown that the energy spectrum of the signal at the receiver output is a convolution of the indeterminacy function of the probing signal and the transition-spectral characteristic of the surface. Six illustrations, bibliography of three titles. N. S.

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Acc. Nr.

AP0034205

Abstracting Service:  
CHEMICAL ABST. 4-70Ref. Code  
WR 0078

74229q Synthesis and properties of nickel oxalate mono-hydrazine. Krylov, E. I.; Nikonenko, E. A.; Sharev, V. A.; Ovchinnikov, Yu. M. (Ural. Politekh. Inst. im. Kirpova, Sverdlovsk, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 38-40 (Russ.).  
A mixt. of 1 g powd.  $\text{NiC}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$ , 8.8 ml  $\text{H}_2\text{O}$ , and 0.2 ml 0.2%  $\text{N}_2\text{H}_4$  was stirred for 1 hr and then left standing at room temp. for 5 hr. The bright-blue ppt. of  $\text{NiC}_2\text{O}_4 \cdot \text{N}_2\text{H}_4 \cdot 2\text{H}_2\text{O}$  (I) was washed with alc. and  $\text{Et}_2\text{O}$ ; at 20°, d. of I is 2.21 g/cm³. The magnetic susceptibility of I, detd. at 87-299°K, agrees with the Curie-Weiss law, with  $\theta = -45^\circ\text{K}$ . I is assumed to have an octahedral structure ( $\mu_{eff} = 3.37 \mu\text{B}$ ). HMJR.

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REEL/FRAME

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--HEAT CAPACITY OF POLYVINYL CHLORIDE, DIODEYL PHTHALATE AND

POLYVINYL CHLORIDE, DIBUTYL PHTHALATE SYSTEMS -U-

AUTHOR--(04)-MARTYNEKU, L.YA., RABINOVICH, I.B., OVCHINNIKO, YU.V.,

MASLUVA, V.A.

CCOUNTRY OF INFO--USSR

SOURCE--VYSOKOCH. SOEDIN., SER. A 1970, 12(4), 841-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ENTROPY, THERMODYNAMICS, POLYVINYL CHLORIDE, PHTHALATE, HEAT  
CAPACITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1381

STEP NO--UR/0459/70/012/004/0841/0848

CIRC-ACCESSION NU--APC1350E5

UNCLASSIFIED

2/2 -022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NU--APC135055

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEAT CAPACITY MEASUREMENTS CONDUCTED WITH MIXTS. OF POLY(VINYL CHLORIDE) (I), DIODYL PHTHALATE (II) AND 1,01,02 PHTHALATE (III) AT 60-360DEGREESK INDICATED THAT THE SYSTEMS WERE MACROSCOPICALLY UNIPHASIC. II AND III OCCURRED IN LIQ. AND VITREOUS STATES. AN EQUATION WAS DERIVED TO ACCOUNT FOR A DECLINE IN THE GLASS TRANSITION TEMP. AS A FUNCTION OF THE ESTER CONTENT. THE GLASS TRANSITION INTERVALS, HEAT CAPACITY, AND ENTROPY INCREMENTS (OF TRANSITION FROM THE LIQ. TO THE VITREOUS STATE) DEPENDED ON II AND III CONTENTS. THE BASIC THERMODYNAMIC FUNCTIONS WERE DETER. BY GRAPHICAL INTEGRATION.

FACILITY: NAUCH.-ISSLED. INST. KHM., GOR'K. GUS.  
UNIV. IM. LOBACHEVSKOGO, GORKI, USSR.

UNCLASSIFIED

1/2 019

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--MATERIALS BASED ON POLYVINYL CHLORIDE FOR PACKAGING FOODS -U-

AUTHOR--(03)--CHANTSEVA, A.S., CHERNOVSKAYA, R.P., OVCHINNIKOV, YU.V.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (6), 62-4

DATE PUBLISHED-----70



SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR, BIOLOGICAL  
AND MEDICAL SCIENCES

TOPIC TAGS--PACKAGING MATERIAL, FOOD CONTAINER, POLYVINYL CHLORIDE,  
PLASTICIZER, CHEMICAL STABILIZER, ACRYLATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0709

STEP NO--UR/0191/70/006/0062/0064

CIRC ACCESSION NO--AP0136148

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136148

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORMULATIONS WERE DEVELOPED FOR THE MANUF. OF SMALL FOOD CONTAINERS. THE MOST ACCEPTABLE MECH., ESTHETIC, AND ORGANOLEPTIC PROPERTIES WERE OBTAINED WITH POLY(VINYL CHLORIDE) CONTG. LESS THAN OR EQUAL TO 3 PARTS DI OCTYL PHTHALATE-100 PARTS COMPN. AS THE PLASTICIZER AND A STABILIZING MIXT. OF CA STEARATE, ZN STEARATE, EPOXIDIZED SOYBEAN OIL, THIOALKOFEN BP, AND POLYGARD. THE ADDN. OF SMALL AMTS. OF VINYL CHLORIDE, 2,ETHYLHEXYL ACRYLATE COPOLYMER INCREASED THE IMPACT STRENGTH OF THE COMPN.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--THE REACTION OF AN INTERELECTRODE SPACE, WITH A VIRTUAL CATHODE, ON  
THE TEMPERATURE CHANGE OF THE ELECTRON BEAM--U  
AUTHOR--(02)--OVCHINNIKOVA, G.I., DEVYATKOV, M.N.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK MOSKOVSKOGO UNIV. FIZ. ASTRON. (USSR), VOL. 11, NO. 1, P.  
3-10 (1970)  
DATE PUBLISHED----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--TEMPERATURE CHARACTERISTIC, SEMICONDUCTOR DIODE, ELECTRON  
BEAM, CATHODE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1684 STEP NO--UR/0188/70/011/001/0003/0010

CIRC ACCESSION NO--AP0122014

UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0122014

ABSTRACT/EXTRACT--(J) GP-0- ABSTRACT. AN APPROXIMATE CALCULATION OF TEMPERATURE SENSITIVITY OF A "MODIFIED" DIODE (AN IDEALISED MODEL WITH PLANE GEOMETRY) IN ITS VIRTUAL CATHODE MODE OF OPERATION IS GIVEN. EXPERIMENTAL MEASUREMENTS ARE COMPARED WITH THE RESULTS OF CALCULATIONS.

UNCLASSIFIED

**Ion Exchange****USSR**

UDC 661.183.123.2

**KAZAKOV, Ye. V., KOTOV, S. D., OVCHINNIKOVA, N. A.****"Synthesis of Organoferrocyanide Ion-Exchange Resins"****Moscow, Khimicheskaya Promyshlennost', No 1, 1973, pp 12-14**

**Abstract:** A study was made of the synthesis of new ion exchange resins -- organoferrocyanides -- characterized by high selectivity with respect to molecular iodine and ions of the heavy alkali metals. With an increase in the capacity of the unit, the production cost dropped significantly.

The described process includes the following steps: preparation of the initial solutions (dissolving the crystalline salts), preparation of the anion exchange resin (screening out dust and swelling in water), alternate impregnation of the resin with the initial solutions, intermediate flushing of the sorbent with water, and washing the product to remove finely disperse fractions. The experience in operating the described unit shows that the process as a whole is characterized by the magnitude of the resin charge in the reactor column and the time of alternate impregnation of the resin with the initial solutions. The minimum cost is achieved for maximum charge.

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USSR

KAZAKOV, Ye. V., et al., Khimicheskaya Promyshlennost', No 1, 1973, pp 12-14

The basic structural materials used were carbon steel St. 3 and alkali and acid resistant steel Kh18N10T.

2/2

- 5 -

Vector Studies

USSR

UDC 599.323.4

CVCHINNIKOVA, N. A., Institute of Plant and Animal Ecology, Ural Affiliate of the Academy of Sciences USSR, Sverdlovsk

"Experimental Study of the Biological Characteristics and Reproductive Isolation of Common and Transcaspian Voles"

Moscow, Doklady Akademii Nauk SSSR, Vol 200, No 3, 1971, pp 712-715

**Abstract:** A comparative study was carried out of common voles (*Microtus arvalis transuralensis* Sereb. 1929) caught in the vicinity of Sverdlovsk and transcaspian voles caught in Turkmenia. The rate of growth, seasonal changes in the weight of sexually mature males, seasonal changes in fertility, external and morphophysiological characteristics, and the degree of reproductive isolation were investigated. The increase in weight of transcaspian voles was completed at the age of 3 months vs. a minimum of 4 months for common voles. The transcaspian voles had a longer body, tail, and tarsus and a relatively heavier liver. Crossing of arvalis females with transcaspian males resulted in high mortality among young, while there was not a single death of the young on crossing of transcaspian females with arvalis males. This was presumably associated with the development of fetuses in the larger bodies of transcaspian females, as compared with the small bodies of arvalis females. Due to

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USSR

OVCHINNIKOVA, N. A., Doklady Akademii Nauk SSSR, Vol 200, No 3, 1971,  
pp 712-715

resorption of embryos, the fertility of mixed pairs was smaller than that of pairs of the same species. The hybrids were larger and heavier than the parents of either species. They were completely infertile. The differences between common and transcaspian voles and their reproductive isolation with respect to each other indicated that the transcaspian vole must be regarded as a distinct species referred to as *Microtus transcaspicus* Satunin 1905.

2/2

- 35 -

USSR

UDC 546.833.181.1'131

GLUSHKOVA, M. A., YERSHOVA, M. M., OVCHINNIKOVA, N. A., and BUSLAEV, YU. A.,  
Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, Academy of  
Sciences USSR

"Study of Some Reactions Using Phosphine Derivatives of Niobium and Tantalum  
Pentachlorides"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 17, No 1, Jan 72, pp 147-149

**Abstract:** Synthesis of the  $MCl_5 \cdot R_3P$  type compounds ( $M = Nb, Ta; R = Bu, Ph$ ) was carried out in  $CCl_4$ , using a 1:1 ratio of starting components. Solutions of  $Ph_3P$  in  $CCl_4$  or  $Bu_3P$  in benzene were added dropwise to a saturated solution of  $MCl_5$  in  $CCl_4$ . Orange  $NbCl_5$  and yellow  $TaCl_5$  formed and precipitated during the addition. After 12 hours, solid was separated by decantation, washed with  $CCl_4$  and dried yielding  $MCl_5 \cdot R_3P$  -- powdery products, soluble in  $CCl_4$  and  $C_6H_6$ . The tantalum products melted higher than the niobium derivatives. When heated above  $300^{\circ}C$  they decomposed.  $MCl_5 \cdot R_3P$  reacted with ethanol yielding  $MCl_3 \cdot (OC_2H_5)_2Ph_3P$ . When dry ammonia was passed through a benzene solution of  $1/2$

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USSR

GLUCHKOVA, M. A., et al., Zhurnal Neorganicheskoy Khimii, Vol 17, No 1, Jan 72,  
pp 147-149

$\text{HCl}_3 \cdot \text{R}_3\text{P}$ , the products formed were  $\text{NbCl}_5 \cdot 6\text{NH}_3 \cdot 0.5\text{C}_6\text{H}_6$  and  $\text{TaCl}_5 \cdot 7\text{NH}_3 \cdot 0.5\text{C}_6\text{H}_6$ .

Study of the thermal behavior of  $\text{NbCl}_5 \cdot \text{Bu}_3\text{P}$  in argon showed that roentgeno-amorphous niobium phosphine chloride --  $\text{NbPCl}_2$  -- is formed at  $475^\circ\text{C}$ , exhibiting plastic properties.

2/2

1/2 040 UNCLASSIFIED PROCESSING DATE--09OCT70  
TITLE--THE LIMITING HYPERSONIC FLOW PAST SOME CENTRAL SURFACES OF THE  
SECOND ORDER -U-

AUTHOR--(02)-OVCHINIKOVA, T.I., MAKUSHKIVA, YE.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK LENINGRADSKOGO UNIVERSITETA, NO 1, MATEMATIKA, NEKHANIKA,  
ASTRONOMIYA, 1970, NR 1, PP 109-119  
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HYPersonic FLOW, PRESSURE, ENTHALPY, FLOW PROFILE, FLOW  
DEFLECTION, DETACHED SHOCK WAVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0388

STEP NO--UR/0043/70/000/000/0109/0119

CIRC ACCESSION NO--AP0055173

UNCLASSIFIED

2/2 040

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0055173

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THIS ARTICLE THE PROBLEM OF LIMITING THREE DIMENSIONAL HYPERSONIC FLOW PAST SOME CENTRAL SURFACES OF THE SECOND ORDER IS CONSIDERED. FORMULAS FOR CALCULATION OF PRESSURE, ENTHALPY AND SHOCK HAVE DETACHMENT ARE RECEIVED.

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UNCLASSIFIED

USSR

UDC 533.601.155

OVCHINNIKOVA, T. I., MAKUSHINA, YE. A.

"Hypersonic Flow of a Gas Around Some Second-Order Central Surfaces"

Leningrad, Vestnik Leningradskogo Universiteta, No 1, January 1970, pp 109-119

**Abstract:** This paper contains an investigation of limiting three-dimensional hypersonic flow of a gas around some second-order central surfaces. Formulas are derived which make it possible to describe the pressure and density fields in the shock layer and to determine the distance between the shock wave and the surface of the body around which flow is taking place. The study includes hypersonic flow around blunt bodies having a plane of symmetry (an elliptical paraboloid and a triaxial ellipsoid) with an arbitrary angle of attack, hypersonic flow of gas around an elliptic paraboloid in the vicinity of the critical point, and hypersonic flow of a gas around an elliptic paraboloid with a zero angle of attack. An example problem is solved for flow around an elliptic paraboloid with a halfaxis ratio of  $a/b = 2$ .

The analysis of limiting hypersonic flow around an elliptic paraboloid and a triaxial ellipsoid permits determination of the flow lines and limiting current entry line, the pressure and enthalpy in the shock layer near the critical point as a function of the curvilinear coordinates  $\xi$  and  $\eta$ , the parameters of the body  $a$  and  $b$  and the directional cosines  $\beta_1, \beta_2, \beta_3$  of the on-coming flow velocity. The distance between the shock wave and the surface of the body is determined in the second approximation.

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1/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE—SEQUENTIAL REACTIONS DURING COMPLEXING IN THE AL PRIME2POSITIVE  
METHYLTHYMOl BLUE SYSTEM -U-

AUTHOR—(02)—MALKOVA, T.V., UVCHINNIKOVA, V.D.

COUNTRY OF INFO—USSR

SOURCE—Izv. Vyssh. Ucheb. Zaved., Khim. Khim. Tekhnol. 1970, 13(1), 24-8

DATE PUBLISHED— 70

SUBJECT AREAS—CHEMISTRY

TOPIC TAGS—DYE, COMPLEX COMPOUND, ALUMINUM COMPLEX, CHEMICAL REACTION  
RATE

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0965

STEP NO—UR/0153/70/013/001/0024/0028

CIRC ACCESSION NO—AP0124624

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO—AP0124624  
ABSTRACT/EXTRACT—(U) GP-0 ABSTRACT. IN THE REACTION OF 2.2-4.4 TIMES 10 PRIME NEGATIVES M AL PRIME3POSITIVE WITH 2.8-8.9 TIMES 10 PRIME ACETATE AMMONIA BUFFER, A MAX. OPTICAL D. AT 500 NM AND 25DEGREES IS REACHED IN 4-8 MIN. AFTER WHICH THE OPTICAL D. SLOWLY FALLS OFF. THIS IS ASSUMED TO RESULT FROM COMPLEX FORMATION IN 2 STAGES AS A CONSEQUENCE OF THE LARGE EXCESS OF AL PRIME3POSITIVE. FURTHER STUDIES OF THE RATE THAT THE RATE CONTROLLING STEP IS ONE OF THE FOLLOWING REACTIONS: AL(H PLUS X H SUB2 O, AND AL(H SUB2 O) PRIME3POSITIVE SUBM-X AL(H SUB2 O) SUBM-X IND. THE SUCCEEDING RAPID REACTION IS ASSUMED TO BE: AL(H SUB2 O) SUBM-X IND PLUS IND EQUALS AL(H SUB2 O) SUBM-X-Y IND SUB2 PLUS YH SUB2 O. THE VELOCITY OF THE LATTER REACTION IS CALCD. AS 62.5 AND 34.6 L.- (MOLE SEC) AT PH 6 AND 5, AND THAT OF THE FORMER RATE CONTROLLING REACTION IS 2.8 AND 3.3 L.- (MOLE SEC) AT PH 6 AND 5. A STABLE COMPLEX IS BELIEVED TO FORM BY THE FOLLOWING REACTION: 2AL(H SUB2) SUBM-X-Y IND SUB2 PLUS AL(H SUB2 O) PRIME3POSITIVE SUBM-X EQUALS IVANOVO, USSR.

FACILITY: IVANOV. KHM. TEKHNL. INST.,  
UNCLASSIFIED

USSR

UDC 539.4

KOP'YEV, I. M., GEMINOV, V. N., KUDINOV, V. V., GALKIN, YU. A., OVCHINSKIY,  
A. S., Moscow

"Testing of Composite Materials in Circular Specimens"

Kiev, Problemy Prochnosti, No 8, Aug 73, pp 120-122

**Abstract:** The possibility is demonstrated of using circular specimens for tensile testing of composite materials reinforced with wire (the matrix was pure aluminum and the armature was wire made from EP-322 steel). The peculiarities of the stress and strain states of the specimens are studied. Results of testing of circular and flat specimens are compared. Three figures, four bibliographs references.

1/1

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Numerical Analysis

USSR

UDC 518(02)

GUTER, R. S., OVCHINSKIY, B. V.

"Elements of Numerical Analysis and Mathematical Treatment of Experimental Results"

Moscow, Elementy Chislennogo Analiza i Matematicheskoy Obrabotki Resul'tatov Opyta (cf. English above), 2nd ed., revised, textbook for students in higher technical educational institutions, "Nauka," 1970, 432 pp, ill., 79 kopecks (from RZh-Matematika, No 9, Sep 1970, Abstract No 9B551 K, by I. Shelikhova)

Translation: The book is intended as a textbook for technical higher educational institutions in computer mathematics and probability theory. It consists of an introduction -- in which the main definitions, terms, and symbols used in the theory of approximation calculation are explained -- and three parts. The first of these deals with basic methods of numerical analysis, the second -- with 1/2

USSR

GUTER, R. S., et al, Elementy Chislennogo Analiza i Matematicheskoy Obrabotki Resul'tatov Opyta, "Nauka," 1970, 432 pp, ill., 79 kopecks

probability theory (at the level of these educational institutions), and the third -- with methods of mathematical treatment of observational results. The following problems are examined: numerical solution of equations and systems, interpolation, approximation integration (formulas of numerical integration), approximation integration of differential equations, events and probability, random variables, error theory, least-squares methods, and representation of observational data as equations (empirical formulas).  
Tables: 106. Illustrations: 66.

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USSR

UDC 617-001.28-036.12-092.9-085.849.1.015.25-07[:  
616.36+616.61]07

MIKHAYLOVICH, S. M., OVDIYENKO, N. I., SEDOV, V. V., LEBEDEVA, G. A., and PARFENOV,  
Yu. D.

"The Effect of Oxathiol on the Liver and Kidneys in Chronic Radiation Sickness  
Induced by the Injection of Polonium210"

Moscow, Meditsinskaya Radiologiya, No 4, 1970, pp 43-51

**Abstract:** A single subcutaneous injection of dogs with 2.5 microcurie/kg of Po<sup>210</sup> produced chronic radiation sickness accompanied by impairment of liver and especially kidney function, causing death of animals in 9 months. In experimental dogs, daily doses of 50 and 25 mg/kg of oxathiol for a month not only mitigated the liver and kidney disorders, but enabled the animals to survive for the entire 7-year observation period. Oxathiol treatments also reduced the size of the absorbed dose of Po<sup>210</sup> in the organs. Oxathiol is a complexing agent that accelerates the excretion of polonium from the body by forming stable water-soluble complexes. The free SH groups contained in oxathiol help to restore the radiation-impaired balance of SH groups in the enzyme systems.

1/1

USSR

UDC 669.721.5:548.53

OVECHKIN, B. I., GUR'YEV, I. I., DZYUBENKO, M. I., IL'INA, R. F.

"Peculiarities of the Variations in Structure During the Process of Deformation and Recrystallization of Magnesium Alloy Sheets"

V sb. Struktura i svoystva legk. splavov (Structure and Properties of Light Alloys -- collection of works), Moscow, Nauka Press, 1971, pp 61-64 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 4I653)

Translation: A study was made of the variation of the structure of MA8 and MA2-1 alloy sheets after warm rolling and annealing. New data were obtained on the peculiarities of recrystallization in these alloys. It was established that in the deformation bands in the surface layers in comparison with the central layers, the temperature range of recrystallization is shifted to lower temperatures. These characteristic features of recrystallization can be used when making sheets in the semipeened state. 3 illustrations and 10-entry bibliography.

1/1

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USSR

UDC 669.017.539.26:620.187

KLIMOVICH, L. G., VAYNBLAT, YU. M., OVECHKIN, B. I., and BER, L. B., All-Union Institute of Light Alloys

"Determination of the Grades of Separations in the Breakdown of the Solid Solution in the Al+0.4%Zr Alloy by Means of Small-Angle X-Ray Dispersion and Electron Microscopy"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 6, 1973, pp 135-137

**Abstract:** The breakdown of the solid solution was investigated on specimens cut out from pressed bars of the Al+0.4%Zr alloy by the methods of small-angle x-ray dispersion (SXD) and electron microscopy. The specimens were aged at 400° and 500° for 10 to 500 hr after water-hardening and heating at 640° for 10 min. It is shown that the particles separating on aging are spherical. Their average sizes satisfactorily coincide with dimensions calculated by the SXD method of oxide replica. The analysis of volumes of different fractions seems to indicate that the quantity of the larger fraction increases with the duration of aging. The joint application of SXD and electron microscopy methods provides reliable information on aging processes of alloys. Two figures, two tables, five bibliographic references.

1/1

USSR

UDC 669.715'884:539.4

KOPELIOVICH, B. A., LASHKOV, N. I., and OVECHKIN, B. I.

"Study of the Effect of Lithium on the State of Grain Boundaries and the Character of Failure in Aluminum-Base Alloys"

Tekhnol. legkikh splavov. Nauch.-tekhn. byul. VII Sa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1971, No 4, p 96 (from RZh-Metallurgiya, No 1, Jan 72, Abstract No 11709 by I. Yeroshenkova)

Translation of Abstract: In Al-Li alloys at 100-500° Li enriches grain boundaries. At 100° in Al-55% Li alloy the excess Li content along the boundaries is 0.36%, at 400° 0.16%. With a rise in temperature from 100 to 550° and with Li content of the alloy remaining constant, the Li excess along the grain boundaries declines and segregation thereof does not result in intercrystalline embrittlement. The failure mechanism of Al-4% Cu-1% Li and VAD 23 alloys has the character of transcrystalline shear. Failure arises on particles of the intermetallides lined up inside grains, with the formation of X-shaped cracks in the matrix. The fusion of these cracks causes transcrystalline failure.

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Acc. Nr.

AP0050715

Abstracting Service:  
CHEMICAL ABST.5/70

Ref. Code

4P0368

10554Gr Conclusions about the properties of a growth curve showing the intensity of the radiation of a spectral line. Ovechkin, G. V.; Sandrigailo, L. E.; Bakhtovarshoev, Sh. (USSR). Zh. Prikl. Spektrosk., 1970, 12(1), 27-34 (Russ.). An empirical correction is made for growth curves of spectral line radiation intensities of Cu I 2441, 2824, 2961, and 5105 Å. Calcns. by using the modified formula indicated that the limiting concns. of atoms varied not only for each line, but also for different discharge conditions, such as the initial concn. of Cu and the heterogeneity of the samples; the latter was found for Na and Cr mixts.

J. Beller

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N

REEL/FRAME  
19810713

1/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--INTRAMOLECULAR REARRANGEMENT OF SUBSTITUTED

3,6,DIHYDRO,2H,PYRIMIDINETHIONES -U-

AUTHOR-(03)-IGNATOVA, L.A., UVECHKIN, P.L., UNKOVSKIY, B.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. VSES. KHM. OБSHCHEST. 1970, 15(2), 238

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--INTRAMOLECULAR MECHANICS, PYRIMIDINE, ORGANIC SYNTHESIS,  
CHEMICAL REACTION MECHANISM, MOLECULAR STRUCTURE, IR SPECTRUM, UV  
SPECTRUM, THIOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1061

STEP NO--UR/0063/70/015/002/0238/0238

CIRC ACCESSION NO--A00128488

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70  
CIRC ACCESSION NO--AP0128488  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 0.67 G  
4,6,6,TRIMETHYL,3,PHENYL,3,6,DIHYDRO,2(1H),PYRIMIDINETHIONE 0.5 MM WITH  
CONCD. HCL GAVE 0.47 G 4,4,6,TRIMETHYL,2,PHENYLAMINO,4H,1,3,THIAZINE, M.  
122-3.5DEGREES. THE STRUCTURE WAS CONFIRMED BY IR AND UV SPECTRA. A  
MECHANISM FOR THE REACTION WAS PROPOSED. FACILITY: MOSK. INST.  
TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

OVECHKIN, V. G.

SO: J-Hes 5381  
[a Aug 91]

SPINAL CORD REFLEX ACTIVITY IN NORMAL AND Labyrinthectomized ANIMALS UNDER THE INFLUENCE OF RADIAL ACCELERATIONS

(Article by O. S. Ayzikov, M. D. Yarlyakov, V. G. Ovechkin and G. V. Tumanov; Moscow, Krasnaya Polyana, 3, 1971, pp. 23-27, submitted 2 June 1991)

Abstract: A study was made of spinal cord-induced potentials (H-reflex) in intact and labyrinthectomized rats at accelerations of 0.5-8 g in a "head-pelvis" direction. The combined effect of accelerations in the range from 0.5 to 8 g considerably changed spinal cord reflex activity. At 0.5 g the H-reflex increased in amplitude and returned to the background values after rotation ceased. At 2, 4 and 8 g the reflex was suppressed in direct proportion to the acceleration. The time for reflex restoration also increased with an increase in acceleration. During accelerations the functional state and activity of the motor analyzer were determined by a combination of factors: reflex changes in motor neuron activity, associated with muscular reception, and vestibular stimuli. In labyrinthectomized animals the depression of spinal activity manifested a muscle dependence of the exposure.

It is known that accelerations in a definite range of intensities considerably change the nature of motor activity. The percentage of operator errors increases, the time required for performing a stipulated task lengthens, and inhibited mobility is observed (I. V. Chkhikidze, A. R.

Korovskaya, et al.; V. I. Yudovity, et al.; Code, et al.). The complexity in performing voluntary movements during acceleration involves an increase in body weight, impaired reflex regulation from the proprioceptors, and changes in conditioned reflex activity as a result of a predominance of habitual cortical processes (M. A. Gord and N. N. Girovskiy; A. S. Burer; S. I. Nudman; Wells and Morehouse).

1/2 029 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--EFFECT OF THE SOMATOTROPHIC HORMONE AND ESCULAMINE ON THE VIABILITY  
OF RATS UNDER THE INFLUENCE OF ACCELERATIONS -U-  
AUTHOR--QVECHKIN, V.G., TUMANOV, G.V.

COUNTRY OF INFO--USSR



SOURCE--MOSCOW, KOSMICHESKAYA BIOLOGIYA I MEDITSINA, RUSSIAN, VOL 4, NO 1,  
JANUARY FEBRUARY 1970, P 80  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ACCELERATION STRESS, SOMATOTROPHIC HORMONE, SPACE MEDICINE,  
ADRENAL GLAND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1936/0752

STEP NO--UR/0453/70/004/001/0092/0009

CIRC ACCESSION NO--AP0102717

UNCLASSIFIED

2/2 022  
CIRC ACCESSION NO--AP0055125

UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH RESPECT TO THE INCREASING ROLE OF GRINDING AMONG PRECISION SURFACE FINISHING METHODS, THE AUTHORS CONVEY THE SUGGESTION OF FORMING A NEW MORE RELIABLE EQUATION FOR DISC LIFE, CONSIDERING THE EFFECT OF VARIOUS FACTORS, THUS OF THE EFFICIENCY OF THE EMPLOYMENT OF INDIRECT MATERIALS, AND WHICH ENSURES IN GENERAL A MORE EXACT DETERMINATION OF THE ECONOMICALNESS OF GRINDING. SUGGESTIONS ARE SUPPORTED BY EVALUATED EXPERIMENTAL RESULTS.

UNCLASSIFIED

USSR

UDC 621.382.539.1.074

KORZYUK, T. G., OVECHKIN, V. V., PASHIN, A. Z., RAU, L. F., SMIRNOV, A. N.,  
TAUBER, A. G., ~~SHCHEBETOV~~, U. V., YUROVSKIY, A. V.

"Use of Thermoelectric Microrefrigerator for Cooling of Gamma-Spectrometric  
Si(Li) Detectors"

V sb. Prikl. yadern. spektroskopiya (Applied Nuclear Spectroscopy --  
Collection of Works), Issue 1, Moscow, Atomizdat, 1970, pp 223-232 (from  
EZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B257)

Translation: The construction and production technology of Si(Li) Gamma  
radiation detectors with a thickness of the sensitive region up to 10 mm  
are described. The spectrometric properties are studied of such detectors,  
which are cooled with the aid of thermoelectric microrefrigerators of  
temperatures of minus 40°C. It is found that such cooled detectors make  
it possible to realize an energy resolution of 1-1.8 percent for  $^{137}\text{Cs}$ .  
Several possible and promising uses in applied spectrometry of the de-  
tectors described are shown.

1/1

- 38 -

1/2 008

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--MAGNESIUM OXIDE PRODUCTION -U-

AUTHOR--(02)-OVECHKIN, YE.K., SHEVTSOVA, L.N.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,373

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, A

DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL PATENT, MAGNESIUM OXIDE, CARBONATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1447

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0126978

UNCLASSIFIED

2/2 008 UNCLASSIFIED PROCESSING DATE--27NOV70  
CIRC ACCESSION NO--AA0126978  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MGO IS PREPD. BY TREATING A MGCL  
SUB2 SOLN. WITH A NA SUB2 CQ SUB3 SOLN. IN A FRESHLY PPTD. SUSPENSION OF  
BASIC MG CARBONATE. THE SUSPENSION IS FILTERED AND WASHED AND THE  
RESULTING BASIC MG CARBONATE IS CALCINED.

UNCLASSIFIED

USSR

UDC 542.91.547.854.4

ZAV'YALOYE, S. I., GUNAR, V. I., and OVECHKINA, Institute of Organic Chemistry  
imeni N. D. Zelinskiy, USSR Akademy of Sciences

"The First Case of  $\beta^2$ -Alkylation of 1-Substituted Uracils"

Moscow, Izvestiya Akad. Nauk SSSR, Seriya Khimicheskaya, No 1, Jan 72,  
pp 210-211

Abstract (letter to editor): The writers claim to have established that  
alkylation of 1-substituted uracils can be directed to the oxygen atom with  
 $\text{C}^2$ , provided  $(\text{CH}_3)_2\text{CHI}$  (YP) is used as the alkylating agent, and also that  
 $(\text{CH}_3)_2\text{COH}$  (TB) is used as the solvent. A structural scheme for the reaction  
is included in the letter.

1/1

USSR

UDC 621.387.1:621.385.7.9

OVECHKINA, B.I.

"Investigation And Construction Of Hollow Hot Cathodes Of Gas-Discharge Devices"

Elektron. tekhnika. Nauch.-tekhn.sib. Gazorazryad. pribory (Electronics Technology. Scientific-Technical Collection. Gas-Discharge Devices), 1971, No 5(32), pp 95-105  
(from RZh:Elektronika i yeye urimenevye, No 2, Feb 72, Abstract No 2A174)

Translation: An investigation is conducted by the neutral probe method of the cathode region of a gas-discharge device with a hot cathode. The results of a study of the potential curves made it possible to obtain the principal relationships for construction of hollow cathodes at a specified d-c current and gaseous medium for the cases of filling with hydrogen and inert gases. Summary.

1/1

1/2 012

UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DEPENDENCE OF THE EFFECTIVENESS OF POLYETHYLENE GLYCOL ACTION ON  
THE PBR OF A PHOTOGRAPHIC EMULSION -U-

AUTHOR-(03)-SHEBERSTOV, V.I., OVECHKINA, T.G., UCHUVATKINA, T.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. NAUCH. PRIKL. FOTOGR. KINEMATOGRAF. 1970, 15(1) 70-1

DATE PUBLISHED-----70

SUBJECT AREAS--METHODS AND EQUIPMENT, CHEMISTRY

TOPIC TAGS--PHOTOGRAPHIC EMULSION, PHOTOGRAPHIC CHEMISTRY, POLYETHYLENE,  
GLYCOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0308

STEP NO--UR/0077/70/015/001/0070/0071

CIRC ACCESSION NO--AP0053293

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0053293

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PBR OF A MODEL AMMONIACAL AG IODOBROMIDE PHOTOGRAPHIC EMULSION (3 MOLE PERCENT AGI BASED ON TOTAL AG HALIDE) CONTG. POLYETHYLENE GLYCOL (1) WAS MEASURED TO DET. THE SENSITIZING EFFECTIVENESS OF I. IN EACH SERIES OF EXPTS. THE STARTING EMULSION WAS DIVIDED INTO SEVERAL PORTIONS (SECONDARY EMULSIONS) BEFORE THE 2ND RIPENING, AND THE PBR WAS DETD. IN EACH OF THEM BY ADDN. OF KBR OR AGNO SUB3 SOLN. THE PH OF ALL THE SECONDARY EMULSIONS WAS APPROX. THE SAME (6.15-6.45). THE SECONDARY EMULSIONS WERE SUBJECTED TO A 2ND RIPENING UNTIL THE LIGHT SENSITIVITY REACHED A MAX. THE EFFECTIVENESS OF I, COMPARED AT THE SAME RELATIVE DEGREE OF 2ND RIPENING, DECREASED WITH INCREASING PBR. THE EFFECTIVENESS OF I ALSO DECREASED WITH INCREASING DEGREE OF RIPENING. THUS, THE EFFECTIVENESS OF I UNDER PRACTICAL CONDITIONS WAS SO SMALL THAT IT WILL LIKELY BE ELIMINATED WHEN TECHNIQUES FOR PREPG. STABLE PHOTOGRAPHIC EMULSIONS WITH HIGH PBR (IS GREATER THAN OR EQUAL TO 4.0) ARE DEVELOPED.

UNCLASSIFIED

Acc. Nr:

APC049765 Abstracting Service:  
CHEMICAL ABST. 5-70

Ref. Code:

UR 0497

101869g Standards for the strength of adhesive bonds of  
footwear bottoms. Qvechkis, E.S.; Tsveifel, R. Sh.; Tsipenyuk,  
A. Ya. (USSR). Kozh.-Obuv. Prom., 1970, 12(1), 42-5 (Russ).

The anal. of process control tests and field trials of several shoe factories resulted in proposing the following stds. for resin delamination strengths ( $S$ ) between shoe uppers of natural leather and soles bonded together with adhesives (sole material,  $S$  in kg/cm given): leather and solid rubber, 9.0; porous rubber 10.0-12.0; porous rubber filled with fibers, 13.0; Stironip, 14.0. The above  $S$  values may be lowered by 1 kg/cm when synthetic leather is used for uppers. Low-grade molded or wholly adhesive-bonded shoes have  $S = 2.5$  kg/cm.

CPJR

3L

REEL/ FRAME  
19801683

7

1/2 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--THE LIMITING STATE AND RELIABILITY OF CONSTRUCTIONS OF RIVER  
VESSELS -U-

AUTHOR--(02)-YERSHOV, N.F., OVECHNIKOV, D.I.

COUNTRY OF INFO--USSR

SOURCE--THE LIMITING STATE AND RELIABILITY OF CONSTRUCTIONS OF RIVER  
VESSELS (PREDEL'NOYE SOSTOYANIYE I NADEZHNOST' KONSTRUKTSIY RODHNYKH  
DATE PUBLISHED----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--RIVER, SHIPBUILDING ENGINEERING, SHIP HULL, INLAND WATERWAY  
TRANSPORTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1991/0584

STEP NO--UR/0000/70/000/000/0001/0151

CIRC ACCESSION NO--AM0110373

UNCLASSIFIED

2/2 011  
CIRC ACCESSION NO--AM0110373

UNCLASSIFIED

PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTRODUCTION 3. CHAPTER I THE DURABILITY AT THE BORDER OF INSTABILITY. 5. II RESILIENT PLASTIC DEFORMATIONS. 41. III CALCULATION OF VESSEL DESIGNS IN THE SUPERCRITICAL REGION INCLUDING PLASTIC DEFORMATIONS. 68. IV TECHNICAL CAUSES AND THE CHARACTER OF BREAKS IN THE HULL OF RIVER VESSELS. 95. V EXPERIMENTAL INVESTIGATIONS OF THE INFLUENCE OF TECHNOLOGICAL AND DESIGN FACTORS ON THE LIMITING DURABILITY OF HULL CONSTRUCTIONS. 132. LITERATURE. 146. GIVEN IS THE METHOD OF CALCULATING THE DURABILITY, RIGIDITY AND STABILITY OF CONSTRUCTION ELEMENTS OF THE HULL OF A VESSEL TAKING INTO ACCOUNT THE PLASTIC DEFORMATIONS ARISING IN THE MATERIAL; THE DURABILITY AT THE BORDER OF INSTABILITY; RESILIENT PLASTIC DEFORMATIONS. ON THE BASIS OF ANALYSIS OF ACCIDENTS AND DAMAGES OF HULLS RECOMMENDATIONS ARE GIVEN ON THE EVALUATION OF THE LIMITING DURABILITY AND RELIABILITY OF RIVER VESSELS.

UNCLASSIFIED

USSR

UDC: 681.325.5

TIMOFEEV, B. B., SUKHOMLINOV, M. M., FERENETS, N. K., STEPKO, D. P.,  
NIKITENKO, V. M., OVERKO, V. A., PRSHISOVSKAYA, T. A., LYFAR', I. N.

"A Specialized Digital Computer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,  
No 47, Dec 73, Author's Certificate No 408304, Division G, filed 23 Jun 70,  
published 10 Dec 73, p 172

Translation: This Author's Certificate introduces a specialized digital computer which contains registers, counters, and a control module connected to the registers and to the overflow outputs of the counters. The device also contains adders, flip-flops, an auxiliary code formation module, coincidence gates, buffer circuits, and a cadence pulse circuit connected to the input of a circuit for obtaining digit potentials. The outputs of this circuit are connected to the inputs of the control module. As a distinguishing feature of the patent, the functional possibilities of the computer are extended by adding a circuit for isolating transition signals, a transition counter, and three auxiliary registers. The output of the transition counter is connected to the first input of the first adder,

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USSR

TIMOFEEV, B. B., et al., USSR Author's Certificate No 408304

whose output is connected to the input of the transition counter. The output of the first auxiliary register is connected to its input through the first coincidence gate, while the outputs of the second and third registers are connected through the second and third coincidence gates to the first inputs of the second and third adders whose outputs are connected to the inputs of the second and third registers respectively. The output of the second adder is connected through the fourth coincidence gate to the first input of the first buffer circuit. The second input of this buffer circuit is connected to the output of the first register, and the output of the buffer circuit is connected to the first input of the circuit for isolating transition signals. The second input of this circuit is connected to the output of the transition counter and, through the fifth and sixth coincidence gates, to the first inputs of the second and third buffer circuits. The outputs of these buffer circuits are connected to the second and third inputs, whose outputs are connected to the second inputs of the second and third adders respectively. The output of the circuits for isolating transition signals is connected through the seventh and eighth coincidence gates to the second inputs of the second and third buffer circuits respectively and, through the ninth coincidence gate,

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USSR

TIMOFEEV, B. B., et al., USSR Author's Certificate No 408304

to the input of the auxiliary code formation module whose output is connected to the third input of the second buffer circuit. The output of the third register is connected through the tenth coincidence gate to the set input of the flip-flop whose output is connected through the eleventh coincidence gate to the second input of the first adder.

3/3

Pharmacology and Toxicology

USSR

UDC 577.1:615.7/9

ZHISLIN, L. E., OVETSKAYA, N. M., and KOSOVA, L. V.

"Comparative Toxicological Characteristics of Thiourea and Its Dioxide With Different Modes of Uptake by the Organism"

Tr. VIII S"yezda gigiyenistov USSR, 1970 (Works of Eighth Congress of Ukrainian SSR Hygienists, 1970), Kiev, "Zdorov'ya," 1971, pp 230-233, discussion pp 250-251 (from RZh-Biologicheskaya Khimiya, No 10, 25 May 1972, Abstract No 10F2186 by M. Sh.)

Translation: Thiourea (I) or its dioxide (II) was administered to rats intraperitoneally, in the form of skin applications, or the animals underwent inhalation inoculation. The authors present data on weight changes of the lungs, thyroid and spleen, as well as data on the morphological composition of the blood and the iodine-accumulation capacity of the thyroid. According to the authors' conclusion, acute toxicity and accumulation capacity are more pronounced for II than for I. I and II can have an adverse effect on the organism both in the event of intake via the respiratory tract and via the intact skin. Therefore, in the authors' opinion measures must be taken during production to prevent the atmospheric environment from being contaminated with aerosols of I and II or workers from coming into direct contact with these compounds, especially from getting solutions thereof on the skin.

1/3 030 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--REFLECTION COEFFICIENT AND FREQUENCY CHARACTERISTICS OF THE E SUBS

LAYER -U-  
AUTHOR-(04)-DANILINA, E.N., DERGUNOVA, A.A., OVEZGELDYEV, O.,

SHIRMAMEDOV, M.

COUNTRY OF INFO--USSR

SOURCE--IZVESTIYA AKADEMII NAUK TURKMENSKOY SSR, SERIYA  
FIZIKO-TEKHNICHESKIKH, KHMICHESKIKH I GEOLOGICHESKIKH NAUK, NO 3, 1970,  
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, NAVIGATION

TOPIC TAGS--E LAYER, RADIO COMMUNICATION, IONOSPHERIC STATION, RADIO WAVE  
ABSORPTION, FREQUENCY CHARACTERISTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0394 STEP NO--UR/0202/70/000/003/0115/0118

CIRC ACCESSION NO--APO137487

UNCLASSIFIED

2/3 030

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137487

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH RESPECT TO RADIO COMMUNICATION THROUGH THE E LAYER IT IS IMPORTANT TO STUDY THE REFLECTION COEFFICIENT P E SUBS FOR DIFFERENT RATIOS OF THE WORKING FREQUENCY OF SOUNDING F SUBWORK AND THE FREQUENCY CHARACTERISTICS OF THIS LAYER F SUBO E (CRITICAL REFLECTION FREQUENCY) AND F SUBB E SUBS (SCREENING FREQUENCY). FOR THIS PURPOSE DURING THE SUMMER OF 1968 SYNCHRONOUS OBSERVATIONS WERE MADE AT ASHKHABAD USING AN IONOSPHERIC STATION AND AN APPARATUS DESIGNED FOR MEASURING THE ABSORPTION OF RADIO WAVES IN THE IONOSPHERE BY THE A SUBL METHOD. THE OBSERVATIONS WERE MADE USING THE FOLLOWING PROGRAM: THE IONOSPHERIC STATION OPERATED IN A FIVE MINUTE REGIME AND GAVE THE TIME VARIATION OF F SUBO E SUBS AND F SUBB AND E SUBS. THE APPARATUS FOR MEASURING ABSORPTION OPERATED AT A FIXED FREQUENCY OF 3.0 MC-SEC. 10 MINUTE MEASUREMENTS ALTERNATED WITH 5 MINUTE BREAKS, MAKING IT POSSIBLE TO DETERMINE THE TEMPORAL VARIATIONS P E SUBS. THE INITIAL EXPERIMENTAL DATA WERE PROCESSED BY STANDARD METHODS. SEVEN SERIES OF SIMULTANEOUS MEASUREMENTS WERE MADE WITH A TOTAL DURATION OF MORE THAN 25 HOURS. COMPARISON OF THE TEMPORAL VARIATIONS OF THE FREQUENCY PARAMETERS F SUBO E SUBS, F SUBB E SUBS AND THE REFLECTION COEFFICIENT P E SUBS REVEALS THAT FOR THE MOST PART THE FOLLOWING TENDENCY IS OBSERVED: WHEN F SUBWORK IS LESS THAN OR CLOSE TO F SUBB E SUBS, P E SUBS N 1. IN THESE CASES THE E SUBS LAYER IS A MIRROR REFLECTING LAYER. THE P E SUBS VALUE DECREASES WHEN F SUBWORK IS GREATER THAN F SUBB E SUBS, WHICH IS DETERMINED FOR THE MOST PART BY THE F SUBWORK-F SUBB E SUBS RATIO.

REF ID: A627487

3/3 030

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137487

ABSTRACT/EXTRACT--AS AN EXAMPLE, THE ARTICLE GIVES THE RESULTS OF SIMULTANEOUS CONTINUOUS MEASUREMENTS MADE ON 29 JUNE 1968. THE DATA IN THE ARTICLE ARE OF A PRELIMINARY NATURE BUT THEY SHOW THAT IN CONTRAST TO THE REGULAR LAYERS OF THE IONOSPHERE, THE VALUES OF THE COEFFICIENT OF REFLECTION FROM THE E LAYER AT FREQUENCIES GREATER THAN F SUBB E SUBS ARE DETERMINED BY THE RATIO F SUBWORK-F SUBB E SUBS. CASES OF REGISTRY OF P E SUBS GREATER THAN 1 WERE NOTED; THESE OCCURRED IN EVERY SERIES. THESE CASES ARE OBSERVED MOST FREQUENTLY WHEN F SUBB E SUBS IS CLOSE TO OR GREATER THAN F SUBWORK, THAT IS, THE CONDITIONS ARE CLOSE TO MIRROR REFLECTION. THESE VALUES OF THE REFLECTION COEFFICIENT ARE ANOMALOUS AND REQUIRE SPECIAL ANALYSIS.

FACILITY: INSTITUTE OF PHYSICS OF THE EARTH AND ATMOSPHERE, ACADEMY OF SCIENCES TURKMEN SSR; ASHKHABAD.

UNCLASSIFIED

1/2 042

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--SPACED PROBING OF THE E SUBS LAYER, PROBING OF THE E SUBS LAYER -1-

AUTHOR-(02)-OVEZGELDYEV, O., BAKALDINA, V.D.

COUNTRY OF INFO--USSR

SOURCE--INSTITUTE OF TERRESTRIAL AND ATMOSPHERIC PHYSICS, ACADEMY, OF  
SCIENCES TURKMAN SSR; MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 2,  
DATE PUBLISHED--70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--E LAYER, ANTENNA, IONOSPHERIC STATION, IONIZATION, VERTICAL  
SOUNDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0350

STEP NO--UR/0203/10/010/002/0385/0386

CIRC ACCESSION NO--AP0114650

UNCLASSIFIED

2/2 042

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0114650

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPATIAL STRUCTURE OF THE SPORADIC E LAYER WAS STUDIED IN THE SUMMER OF 1966 BY SPACED PROBING OF THE E SUBS LAYER AT TWO STATIONS ABOUT 20 KM APART. IDENTICAL APPARATUS AND ANTENNAS WERE USED AT BOTH POINTS. SIMULTANEITY OF MEASUREMENTS TO ABOUT 20 SEC WAS ENSURED. IN ADDITION TO 15 MINUTE OBSERVATIONS, SIMULATNEOUS CONTINOUS SOUNDINGS WERE MADE. THIRTY SUCH SERIES OF OBSERVATIONS WERE MADE WITH A TOTAL DURATION OF ABOUT 150 HOURS. COMPARISON OF THE TEMPORAL CHANGES IN FREQUENCY CHARACTERISTICS FOR THE E SUBS LAYER (F SUB0 E SUBS AND F SUBB E SUBS) AT BOTH OBSERVATION STATIONS REVEALS THAT THEY DIFFER SOMEWHAT FROM ONE ANOTHER. FIRST, THE CURVES ARE IN SOME CASES DISPLACE RELATIVE TO ONE ANOTHER WITH AN ABSOLUTE TIME SHIFT UP TO 4 MIN; SECOND, THE VALUE AND NATURE OF THE F SUB0 E SUBS AND F SUBB E SUBS VARIATIONS AT THE TWO OBSERVATION STATIONS ARE NOT IDENTICAL. IT WAS FOUND THAT F SUB0 E SUBS AND F SUBB E SUBS VARY IN THE RANGES 0-5.7 AND 0-5.0 MC-SEC RESPECTIVELY. THE MEAN ARITHMETICAL VALUES F SUB0 E SUBS AND F SUBB AND E SUBS VARY IN THE RANGE 0.46-2.4 AND 0.29-1.5 MC-SEC AND THEIR MEDIAN VALUES FROM 0.3-1.1 TO 0.2-1.2 MC-SEC. THE OBSERVED DISCREPANCIES IN THE FREQUENCY CHARACTERISTICS OF THIS LAYER CAN ONLY BE CAUSED BY THE HORIZONTAL GRADIENT OF IONIZATION IN THE E SUBS LAYER. THE RESULTS OF THE ANALYSIS THEREFORE INDICATE THAT THE E SUBS LAYER IS CHARACTERIZED BY A GREAT HORIZONTAL IONIZATION GRADIENT.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--SPACE DIVERSITY RECEPTION SOUNDING OF THE ES LAYER -U-

AUTHOR-(02)-OVEZGELDYEV, BAKALDINA, V.D.

COUNTRY OF INFO--USSR

SOURCE--GEOMAGNETIZM I AERONOMIJA, VOL. 10, NO. 2, 1970, P. 355, 356

DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--E LAYER, IONOSPHERIC STATION, IONIZATION, DIVERSITY RECEPTION,  
ATMOSPHERIC SOUNDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1997/0159

STEP NO--UR/0203/T0/010/002/0355/0356

CIRC ACCESSION NO--AP0119155

UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0119155

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF SPACE DIVERSITY RECEPTION DATA OBTAINED IN SUMMER 1966 FOR THE SPORADIC E LAYER AT TWO IONOSPHERIC STATIONS SPACED 20 KM APART. THE DATA WERE OBTAINED WITH IDENTICAL EQUIPMENTS AND ANTENNAS AND USING THE SAME PROGRAM. THE TIME DIFFERENCE AT THE STATIONS DID NOT EXCEED 20 SEC. AN OBSERVED DISCREPANCY BETWEEN THE FREQUENCY CHARACTERISTICS OF THE SPORADIC E LAYER IS ATTRIBUTED TO THE PRESENCE OF A LARGE HORIZONTAL IONIZATION GRADIENT IN THE LAYER. FOR STATIONS SPACED 20 KM APART, THIS GRADIENT CAN CAUSE AN IONIZATION NONUNIFORMITY OF ROUGHLY 10PERCENT.

FACILITY: AKADEMIYA NAUK TURKMENSLOV SSR INSTITUT FIZIKI ZEMLI I ATMOSFERY, ASHKHABAD, TURKMEN SSR.

UNCLASSIFIED

USSR

BERDYYEV, A. S., GLEBEZDIN, V. S., OVEZMUKHAMMEDOV, A., and REMYANNIKOVA, T. N.

"First Congress of the All-Union Society of Protozoologists (12-15 October 1971)"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR, Seriya Biologicheskikh Nauk, No 1, 1972, pp 92-93

**Abstract:** The first congress of the All-Union Society of Protozoologists, meeting in Baku, was attended by 250 delegates and guests, including nine persons from Turkmenia. There were three plenary sessions and four sections (General Protozoology; Medical Protozoology; Veterinary Protozoology; Parasitic Protozoa of Fish and Invertebrates). The president of the All-Union of Protozoologists, Professor Yu. I. Polyanskiy, spoke of "Prospects of Development of Protozoology in the USSR." Sh. D. Moshkovskiy, corresponding member of the Academy of Medical Sciences, USSR, spoke on "Protozoology and Immunology," Professor D. N. Zasukhin delivered a lecture on "I. I. Mechnikov and Contemporary Problems of Protozoology," Professor N. A. Kolabskiy spoke on "Professor V. L. Yakimov and his Role in the Development of Protozoology and Chemotherapy." Particular attention was attracted by the lecture of Professor Yu. I. Polyanskiy, "Some Aspects of the Evolution of Protozoa."

1/2

USSR

UDC 621.318.57:621.382

OVLASTYUK, V. Ya., DUBROVIN, V. I., Scientific Research Institute of Rail-way Transportation

"A Symmetric Flip-flop"

USSR Author's Certificate No 325963, filed 13 Jul 70, published 3 Mar 72  
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 9,  
Sep 72, Abstract No 9A35 P)

Translation: This Author's Certificate introduces a transistorized symmetric flip-flop with decoupling diodes in the input circuits. The device contains a count input capacitor and delay capacitors. In order to increase the resistance of the flip-flop to the effects of rf interference signals, the delay capacitors are connected in parallel with the emitter-base and emitter-collector junctions of the transistors, and the outputs of the count input capacitor are connected to the anodes of additional diodes whose cathodes are connected to the bases of the transistors. One illustration.

1/1

1/2 028

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--CLINICAL FORMS OF ACUTE HEPATIC INSUFFICIENCY AND MODES OF THEIR  
THERAPY -U-  
AUTHOR-(05)-GALPERIN, E.I., NEKLYUDOVA, YE.A., IVANOV, P.A., OVNATANOV,  
B.S., YAREMA, I.V.  
COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 2, PP 40-48

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIVER FUNCTION, JAUNDICE, CIRRHOsis, PROTEIN METABOLISM,  
HEMORRHAGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/1730

CIRC ACCESSION NU--AP0103494

UNCLASSIFIED

STEP NO--UR/0531/70/000/002/0040/0048

2/2 028

CIRC ACCESSION NO—AP0103494

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHORS COMMIT TO PAPER  
DUCTS WAS ACCCOMPANIED BY MANIFESTATIONS OF HEPATIC INSUFFICIENCY. THESE  
PATIENTS WERE DIVIDED INTO TWO GROUPS, VIZ. WITH BILIARY HYPERTENSION  
(OBSTRUCTIVE JAUNDICE) AND WITH CIRRHOSIS AND TUMORS OF THE LIVER, AS  
WELL AS DISTURBED PORTAL AND HEPATIC CIRCULATION. COMPLEX TREATMENT IS  
INDICATED IN HEPATIC INSUFFICIENCY IT BEING AIMED AT IMPROVING HEPATIC  
FUNCTION, CORRECTION OF THE WATER ELECTROLYTE BALANCE, PROTEIN  
METABOLISM, REDUCTION OF AMMONIA INTOXICATION, CHECKING HEMORRHAGES IN  
PATIENTS WITH PORTAL HYPERTENSION AND BLEEDING FROM DILATED ESOPHAGEAL  
VEINS. WITH THE DEVELOPMENT OF A SEVERE FORM OF INSUFFICIENCY PREMATOUS  
STATE AND INEFFECTIVENESS OF CONSERVATIVE THERAPY, EXTRACORPOREAL  
CLEARANCE OF THE BLOOD, WHICH DIMINISHES INTOXICATION, IS INDICATED.

UNCLASSIFIED

1/2 028

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--COMPARATIVE CHARACTERISTICS OF ELECTRO STIMULATION OF THE SCIATIC  
NERVE IN HAND AND MECHANICAL SUTURE IN EXPERIMENT -U-

AUTHOR--(02)-BUYEV, YU.M., QVNATANOV, B.S.

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 2, PP  
55-57  
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NERVE TISSUE, NERVE REGENERATION, SPINAL NERVE, SUTURE,  
TANTALUM, SURGERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1990/0638

STEP NO--UR/0481/70/000/002/0055/0057

CIRC ACCESSION NU--APO108849

UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0108849

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXPEDIENCY OF USING MECHANICAL EPINEURAL SUTURE WITH THE AID OF A SPECIAL APPARATUS FOR NERVE SUTURE IS BEING CONSIDERED. EXPERIMENTS WERE DONE ON 12 DOGS. IN 6 DOGS A SECTIONED NERVE WAS SUTURED BY HAND SILK EPINEURAL SUTURE AND IN 6 DOGS, BY TANTALUM STAPLING MACHINE. ELECTROSTIMULATION OF THE NERVE BY CHRONAXIMETRY WAS TESTED PRIOR TO NERVE SECTION AND AFTER ITS SUTURE 14 AND 30 DAYS LATER. THE RESULTS SHOW THAT RESTORATION OF ELECTROSTIMULATION IS 2.5 TIMES QUICKER AFTER MECHANICAL SUTURE, WHICH SPEAKS FOR ITS ADVANTAGES AS COMPARED WITH THE HAND SUTURE.

FACILITY: 4-YA KHIRURGICHESKAYA KLINIKA AND PATOFIZIOLOGICHESKAYA LABORATORIYA INSTITUTA SKOROY POMOSHCHI IM. N. V. SKLIFOSOVY, MOSCOW.

UNCLASSIFIED

1/2 026

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--REGIONAL HYPOTHERMIA OF THE TRUE PELVIS IN THE OPERATIVE TREATMENT  
OF PROSTATIC ADENOMA -U-

AUTHOR-(03)--OVNATANYAN, K.T., SUSLOV, V.V., GLUKHOVA, K.Z.

COUNTRY OF INFO--USSR

SOURCE--UROLOGIYA, I NEFROLOGIYA, 1970, NR 2, PP 60-63

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYPOTHERMIA, SURGERY, ARTERY, GANGLIONIC BLOCKING AGENT,  
TUMOR, UROLOGY, REPRODUCTIVE SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

P&OXY REEL/FRAME--1985/1723

CIRC ACCESSION NO--AP0101776

UNCLASSIFIED

STEP NO--UR/0606/70/000/002/0060/0063

2/2 026

CIRC ACCESSION NO--AP0101776

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE AUTHORS EMPLOYED LIGATION OF INTERNAL ILIAC ARTERIES (56 OPERATIONS), CONTROLLED HYPOTENSION WITH THE AID OF GANGLIONIC BLOCK (120 OPERATIONS) AND REGIONAL HYPOTERMIA OF THE TRUE PELVIS CAVITY (75 OPERATIONS) TO REDUCE BLOOD LOSSES IN ADENOMECTOMY. THE LASTLY NAMED METHOD CONSISTS IN CONCURRENT COOLING OF THE SUPRAPUBIC REGION, URINARY BLADDER AND PROSTATE, VIA THE RECTUM. THE COOLING MEDIUM TEMPERATURE WAS 0-3DEGREES. THE COOLING TIME VARIED FROM 20 TO 35 MINUTES. THE AVERAGE TEMPERATURE OF THE PROSTATE REGION WAS 22DEGREES. IN A SINGLE STAGE ADENOMECTOMY PERFORMED AGAINST THE BACKGROUND OF LOCAL COOLING THE AVERAGE BLOOD LOSS AMOUNTED TO 90 ML. THE MERITS OF THE METHOD INCLUDE ITS TECHNICAL SIMPLICITY, ACCESSIBILITY AND SAFETY.

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USSR

UDC 627.81:624.131.6.001.5(47+57)

OVODOV, V. S., ISHCHEŃKO, YU. A.

"Forecasting Seepage from the Krasnodar Reservoir to the Tailrace (1967)"

Izuch. i ispol'z. vodn. resursov SSSR, 1966-1967 -- V sb. (Study and Use of USSR Water Resources, 1966-1967 -- Collection of Works), Moscow, Nauka Press, 1970, pp 78-79 (from RZh-Elekrotekhnika i Energetika, No 2, Feb 71, Abstract No 2 D189)

Translation: The Krasnodar Reservoir with a capacity of 3,200,000,000 m<sup>3</sup> is formed by erection of an urban dam ~14,000 meters long in the Kuban' section. Seepage from the reservoir to the tailrace and the conditions of protection of the lands from possible elevation of the water table and swamping by draining the seep through vertical drains at the dam have been investigated. The studies were performed on the ZGDA-9/60 integrator. It was established that the structure of the Krasnodar Reservoir without antisepage measures implies water-table elevation and probably swamping of a broad area below the dam on the left bank.

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USSR

UDC 547.917+639.94

KHOMENKO, V. A., PAVLENKO, A. F., SOLOV'YEVA, T. F., and OVODOV, YU. S.,  
Institute of Biologically Active Substances, Far Eastern Scientific Center of  
the USSR Academy of Sciences

"Polysaccharides of the Brown Algae. IV. Fragmentation of the Sargassan and  
Pelvetian Molecules"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 4, 1971, pp 393-396

**Abstract:** It was desired to discover simpler fragments of sargassan and pelvetian, which are polysaccharides previously investigated by this research group and derived from the algae *Sargassum pallidum* and *Pelvetia Wrightii*, respectively.

Assuming the presence of a glucoronide chain, the authors subjected these biopolymers to alkali degradation (with NaOH) in the presence of sodium borohydride, and also induced hydrolysis in these substances. Treating sargassan and pelvetian with dilute sulfuric acid produced xylose, fucose and a series of digosaccharides, with detachment of a polypeptide in the form of a dark-brown precipitate. When degraded with alcohol and subjected to complete acid hydrolysis, these polysaccharides yielded galactose, mannose, xylose, fucose and glucoronic acid, along with glucuronolactone.

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KHOMENKO, V. A., et al., Khimiya Prirodyakh Soyedineniy, No 4, 1971, pp 393-396

Based on these results and on chromatographic data, the presence of a linear, high-molecular fragment in both the sargassan and the pelvetian molecules was concluded.

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USSR

UDC 547.917+639.64

SOLOV'YEVA, T. F., KHOMENKO, V. A., PAVLENKO, A. F., and OVODOV, YU. S., Institute of Biologically Active Substances, Far Eastern Scientific Center of the USSR Academy of Sciences

"Polysaccharides of the Brown Algae. V. Smith's Degradation of Sargassan and Pelvetian"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 4, 1971, pp 396-398

**Abstract:** This study is an extension of earlier work on the fragmentation of sargassan and pelvetian with use of partial hydrolysis; here, degradation by F. Smith's method was used.

Polyaldehydes, obtained by per-iodic oxidation of sargassan and pelvetian, were reduced to polyalcohols, which were then subjected to both complete and partial hydrolysis. In the complete hydrolysis, a mixture of monosaccharides obtained by evaporation of the polyalcohols was studied by gas-liquid chromatography in the form of the corresponding acetates and aldonitryl acetates: here glycol and glycerine aldehydes, glycerine, fucose, mannose and galactose were produced, along with minute amounts of xylose, threite, erythrite and propylene glycol (this result was obtained for both the sargassan- and the pelvetian-derived polyalcohols). Similarly, partial hydrolysis yielded fucose, galactose, mannose, glucoronic acid, and a small amount of propylene glycol.

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SOLOV'YEVA, T. F., et al., Khimiya Prirodnnykh Soyedineniy, No 4, 1971, pp 396-398

It was thus demonstrated that in pelvetian and sargassan, the mono-saccharide groups exhibit a high degree of substitution (sulfate groups, branching); while those groups of xylose which are part of the polysaccharides are to a considerable degree oxidized by the periodate.

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USSR

UDC 548.4

OVODOVA, A. V. and BOBAGV, L. V.

"Appearance of Dislocations on the (100) Plane"

Nauch. tr. N.-i. i proyekt. in-t redkomet. prom-sti (Scientific Transactions of the Scientific Research and Design Institute of the Rare Metal Industry) 1971, 22, pp 44-47 (from RZh-Fizika, No. 9, 1971, Abstract No. 9E457)

Translation: The action of etchers with a predominate content of dissolving components and copper ions on the (100) plane of Ge monocrystals is investigated. The assumption is made that the copper deposited in the loci of the defects accelerates their solution. An increase in the dislocation density at the (100) plane compared with the other crystalline planes was observed.

Resume

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1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--HYDRATION HARDENING OF DISPERSED MERWINITE -U-  
AUTHOR--(03)-GOVOROV, A.A., OVRAMENKO, N.A., OVCHARENKO, F.D.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 808-8  
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS  
TOPIC TAGS--CRYSTAL STRUCTURE, CALCIUM COMPOUND, MAGNESIUM COMPOUND,  
SILICATE, HYDRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3008/0995

STEP NO--UR/0363/70/006/004/0803/0808

CIRC ACCESSION NO--APOL38023 UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138023

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CRYST. MERWINITE IN THE PURE FORM DISPLAYED INSIGNIFICANT HYDRAULIC ACTIVITY AT TREATMENT TEMPS. OF 100 AND 150DEGREES AND A SIGNIFICANTLY GREATER ACTIVITY AT 200 AND 250DEGREES, WHEREBY AT THE LATTER 2 TEMPS. IT HYDRATES ALMOST FULLY. THE PRESENCE OF A SMALL AMT. OF GLASS IMPURITIES IN THE MERWINITE SIGNIFICANTLY INCREASES THE ACTIVITY OF THE LATTER AT TEMPS. OF HYDROTHERMAL TREATMENT AT 100 AND 150DEGREES AND HAS A STRONG INFLUENCE ON THE PHASE COMPN. OF NEW FORMATIONS. WITH INCREASED TEMP. THE EFFECT OF THE GLASS IMPURITY WEAKENS. . . . .  
FACILITY: INST. KOLLOID. KHIM. KHIM. VODY, KIEV, USSR.

UNCLASSIFIED

USSR

UDC: 681.3

OVRUTSKIY, A. I.

"An Algorithm for the Operation of Extracting the Square Root"

V sb. Vychisl. tekhn. i vopr. kibernet. (Computer Technology and Problems of Cybernetics--collection of works), Vyp. 6, Leningrad, Leningrad University, 1971, pp 32-36 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V898)

[No abstract]

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USSR

UDC 669.01:63

OVRUTSKIY, A. M., and SALLI, I. V.

"Investigation of the Mechanism of Growth of Primary Bismuth Crystals in Bi-Sn Alloys"

Kiev, Metallofizika, No 32, 1970, pp 118-123

Translation: The kinetics of growth and the formation of various forms of growth of primary bismuth crystals in alloys containing 0, 2, 5, 10, 20 and 30 wt.% tin were studied. The supercooling range over which the plane-face form of growth remains stable was established (crystals with a square and triangular cross section were observed). For crystallites with an edge of 0.16 mm this supercooling is 1, 3, 7, 16, 16, and 16°C, respectively, for alloys of the concentrations specified. As the supercooling increases, the form of growth changes. The crystal angles begin to extend and become the preferential direction of growth, subsequently forming dendrites, whose thickness is reduced as supercooling is increased.

The linear rates of growth and dissolution of primary bismuth crystals depending on the supercooling or superheating in alloys containing 10, 1/2

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OVRUTSKIY, A. M., and SALLI, I. V., Metallfizika, No 32, 1970, pp 118-123

20, and 30 wt.% tin were determined. A comparison of the rates of growth and dissolution makes it possible to conclude that transfer processes have a marked effect on the rate of growth of plane-face crystals.

Bibliography: 8 entries. Illustrations: 5.

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1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--THE IMPORTANCE OF ALLERGY TO DRUGS IN THE CONSERVATIVE TREATMENT OF  
PULPITIS -U-  
AUTHOR--(02)-DVRUTSKIY, G.D., BOGATYREVA, V.A.

COUNTRY OF INFO--USSR

SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 27-29

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORAL DISEASE, TOOTH, ALLERGIC DISEASE, ORAL HYGIENE,  
ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0096

STEP NO--UR/0511/70/049/003/0027/0029

CIRC ACCESSION NO--AP0120796

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